



Lebourgeois Portuguese Cushion

by Arya Akhavan, derived from John Bailey
December 2014

Angles for R.I. = 1.610

137 + 20 girdles = 157 facets

2-fold, mirror-image symmetry

96 index

L/W = 1.240 T/W = 0.733 U/W = 0.525

P/W = 0.718 C/W = 0.219

Vol./W³ = 0.511

PAVILION

P1	40.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Cut to centerpoint.
P2	42.48°	96-06-12-18-24-30-36-42-48-54-60-66-72-78-84-90	Cut conservatively.
P3	45.48°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Meet P1, P2
P4	48.51°	06-12-18-24-30-36-42-54-60-66-72-78-84-90	Meet P2, P3
P5	48.16°	96-48	Meet P2, P3
P6	52.60°	09-15-21-27-33-39-57-63-69-75-81-87	Meet P3, P4
P7	62.77°	20-28-68-76	Meet P4, P6
P8	64.69°	22-26-70-74	Meet P4, P6
P9	70.79°	05-43-53-91	Meet P4, P6
P10	73.44°	03-45-51-93	Meet P4, P6, P9
P11	75.07°	01-47-49-95	Meet P3, P4, P5, P10
G1	90.00°	22-26-70-74	Set stone length.
G2	90.00°	20-28-68-76	Level girdle.
G3	90.00°	05-43-53-91	Level girdle.
G4	90.00°	03-45-51-93	Level girdle.
G5	90.00°	01-47-49-95	Level girdle.

CROWN

C1	45.53°	22-26-70-74	Set girdle width.
C2	44.68°	20-28-68-76	Level girdle.
C3	44.25°	05-43-53-91	Level girdle.
C4	44.89°	03-45-51-93	Level girdle.
C5	45.00°	01-47-49-95	Level girdle.
C6	42.72°	96-48	Meet G5, C5
C7	42.25°	04-44-52-92	Meet G3, G4, C3, C4; C4, C5, C6
C8	42.56°	21-27-69-75	Meet G1, G2, C1, C2; C2, C3, C7
C9	37.63°	24-72	Meet C1, C8
C10	28.85°	12-36-60-84	Meet C2, C3, C7, C8
C11	38.32°	02-46-50-94	Meet C4, C5, C6, C7
T	0.00°	Table	Meet all table meets.

This design uses the outline and crown of John Bailey's "OMNI Cushion One", but uses a Portuguese pavilion with barion principles, and can still be cut in a meetpoint manner. It has a very similar appearance to the standard Portuguese's "light swirl" effect. Works in materials from topaz to corundum (RI = 1.61 - 1.76) with no changes, but can be adapted as low as quartz or as high as CZ with a bit of scaling.

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